

April 27, 2017

CERTIFIED MAIL: 7016 1370 0002 2764 1492 RETURN RECEIPT REQUESTED

Chief, Air and TRI Section **Enforcement Division** U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, California 94105

CERTIFIED MAIL: 7016 1370 0002 2764 1485

RETURN RECEIPT REQUESTED

Director, Air Enforcement Division Office of Civil Enforcement U.S. EPA Headquarters, MC 2242A 1200 Pennsylvania Avenue, NW Washington, D.C. 20460

CERTIFIED MAIL: 7016 1370 0002 2764 1478 RETURN RECEIPT REQUESTED

Chief, Environmental Enforcement Section Environment and Natural Resources Division U.S. Department of Justice Box 7611 Ben Franklin Station Washington, D.C. 20044-7611

Re: DOJ No. 90-5-2-1-10459

Re: United States v. Asarco

> Consent Decree No. CV-15-02206-PHX-DLR Quarterly Report for the First Quarter of 2017

Presented below is Asarco's quarterly report for the first quarter of 2017, as required by paragraphs 55 and B.36 of the above-referenced consent decree. Consent Decree reporting requirements are in bold italics followed by the required report information.

Paragraph 55.a.i: Emissions and monitoring data and corrective action records, including the following:

(1) The results of any performance tests that were required by the Consent Decree;

Smelter Method 5 Performance Tests:

No performance testing was conducted in the first quarter of 2017.

Smelter Method 5B Performance Tests:

No performance testing was conducted in the first quarter of 2017.

Concentrator Method 5 Performance Tests:

No performance testing was conducted in the first quarter of 2017.

Flash Furnace, Converter, and Anode Buildings Opacity Performance Tests:

N/A. The due date for the submittal of a performance test plan per 40 C.F.R. § 63.1450(c) is 60 days after the completion of the converter retrofit project (CRP).

- (2) Copies of any Visible Emissions evaluations or records for which opacity was 4 percent or greater for the building housing the flash furnace, converters, and anode furnaces (to include date, time, and duration of the opacity);
- (3) A description of any corrective actions taken to address the opacity from the building housing the flash furnace, converters, and anode furnaces (to include the date and time such actions were commenced and completed), along with a description of the cause of the opacity;

Exceedance(s) of 4% opacity limit applicable to visible emissions from the flash furnace, anode furnaces, and converter and not yet superseded by requirements related to the installation of the long-path optical density monitors:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

- (4) Dates, times, and duration of each bag leak detection system alarm sounding, the cause of the alarm and the date and time that ASARCO commenced investigation of the baghouse, and a description of the corrective actions taken, if any, along with the date and time such corrective actions were completed;
- (5) The total alarm time for each bag leak detection system, as determined in accordance with subparagraph 26.a.v;

Total alarm time for each bag leak detection system:

The secondary hood baghouse had the following alarms during the first quarter of 2017.

Date	Time of Alarm	Total Duration of	Module Number
		Alarm (hours)	
1/4/2017	13:04 - 18:04	5.0	4
3/22/2017	11:51 – 12:24	0.55	4
1/20/2017	22:42 - 22:45	0.05	6

The anode baghouse had the following alarms during the first quarter of 2017.

Date	Time of Alarm	Total Duration of Alarm (hours)	Module Number
1/27/2017	13:29 - 13:30	0.02	2
1/30/2017	14:17 – 14:18	0.02	2
2/3/2017	12:57 – 12:58	0.02	2
2/3/2017	23:37 - 23:38	0.02	2
2/4/2017	14:17 – 14:18	0.02	2
2/7/2017	9:37 - 9:38	0.02	2
2/11/2017	21:25 - 21:26	0.02	2
2/13/2017	1:25 -1:26	0.02	2
2/14/2017	00:05 - 00:06	0.02	2
2/14/2017	12:05 - 12:06	0.02	2
2/16/2017	13:25 -13:26	0.02	2
2/16/2017	14:45 - 14:46	0.02	2
2/16/2017	17:25 – 17:26	0.02	2
2/16/2017	18:45 - 18-46	0.02	2
2/17/2017	13:25 - 13:26	0.02	2
2/25/2017	11:04 - 11:05	0.02	2
2/28/2017	2:00 - 2:01	0.02	2
3/01/2017	14:50 -14:51	0.02	2
3/01/2017	18:21 – 18:22	0.02	2
3/3/2017	18:12 – 18:13	0.02	2
3/3/2017	20:52 - 20:54	0.03	2
3/3/2017	22:12 - 22:13	0.02	2
3/4/2017	8:51 - 8:52	0.02	2
3/5/2017	6:07 - 6:08	0.02	2
3/6/2017	17:03 - 17:04	0.02	2
3/7/2017	2:16 - 2:17	0.02	2
3/7/2017	13:14 - 13:15	0.02	2
3/7/2017	21:09 - 21:10	0.02	2
3/7/2017	22:29 - 22:30	0.02	2
3/7/2017	23:49 - 23:50	0.02	2
3/8/2017	1:09 - 1:10	0.02	2
3/8/2017	5:09 - 5:10	0.02	2
3/8/2017	6:25 - 6:27	0.03	2
3/8/2017	8:47 - 8:48	0.02	2
3/8/2017	10:07 -10:08	0.02	2
3/8/2017	12:47 - 12:48	0.02	2
3/8/2017	15:27 - 15:28	0.02	2
3/8/2017	16:47 - 16:48	0.02	2
3/8/2017	18:07 - 18:08	0.02	2
3/8/2017	19:27 – 19:28	0.02	2
3/8/2017	20:47 - 20:48	0.02	2
3/8/2017	22:07 – 22:08	0.02	2
3/8/2017	23:24 – 23:25	0.02	2

3/9/2017	0:44 - 0:45	0.02	2
		0.02	2
3/9/2017	2:04 - 2:05	0.02	2
3/9/2017	3:24 - 3:25	0.02	2
3/9/2017	4:44 - 4:45	0.02	2
3/9/2017	6:54 - 6:55	0.02	2
3/9/2017	7:34 - 7:35	0.02	2
3/9/2017	8:44 - 8:45	0.02	2
3/9/2017	10:04 - 10:05	0.02	2
3/9/2017	11:24 - 11:27	0.05	2
3/9/2017	12:44 - 12:45	0.02	2
3/9/2017	14:24 - 14:25	0.02	2
3/9/2017	15:02 - 15:03	0.02	2
3/9/2017	16:21 - 16:22	0.02	2
3/9/2017	17:41 - 17:42	0.02	2
3/9/2017	19:01 - 19:02	0.02	2
3/9/2017	20:21 - 20:22	0.02	2
3/9/2017	21:41 - 21:42	0.02	2
3/10/2017	1:30 - 1:32	0.02	2
3/10/2017	2:50 - 2:51	0.02	2
3/10/2017	4:10 - 4:11	0.02	2
3/10/2017	5:30 - 5:31	0.02	2
3/10/2017	6:04 - 6:05	0.02	2
3/10/2017	6:20 - 6:21	0.02	2
3/10/2017	6:43 - 6:44	0.02	2
3/10/2017	8:03 - 8:04	0.02	2
3/10/2017	9:22 - 9:23	0.02	2
2/7/2017	9:39 - 9:40	0.02	4
2/7/2017	10:02 - 10:03	0.02	4
3/1/2017	10:45 - 10:46	0.02	4

Exceedance(s) of alarm limit of no more than 5% of total operating time in any 6-month period:

Secondary Hood Baghouse: Oct. 1, 2016 – Mar. 31, 2017	
Total duration of bag leak detection system alarm hours	14.49
Total hours of source operation	
Percent of time in alarm (operating hours)	

Annala Danhawan Oat 1 2016 Mar 21 2017	
Anode Baghouse: Oct 1, 2016 – Mar. 31, 2017	
Total duration of bag leak detection system alarm hours	47.50
Total hours of source operation	4008
Percent of time in alarm (operating hours)	

Note: The Hayden Smelter was down from November 4, 2016 through November 21, 2016 for a maintenance outage and to tie in the new wet gas cleaning equipment. No processing equipment was operating during this time period.

Investigation(s), cause(s) and corrective action(s) taken:

The alarms at the secondary hood baghouse are still the result of rust on the air lines for the blow pipes at #4 and #6 modules. When inspected no broken bags have been found up-todate. The presence of this rust is causing the diaphragms to malfunction. Instrument tech's have been called to inspect probes and they have cleaned them.

For the anode baghouse regarding #2 module alarms for Feb 02 thru Feb 17th were caused by leaks that were subsequently replaced. Alarms on Feb 25th and 28th were caused by a broken bag (1 each day) that were replaced. Alarms on March 1st thru March 10th were also caused by broken bags, this time 3 bags were replaced (1 on the 6th and 1 on the 8th and the 3rd one on the 10th). On module #4, 4 broken bags were replaced due to small leaks. 3 on Feb 7th and 1 on March 1st. The frequency of occurrence and short time of alarms for #2 module is likely due to a small hole in the bag. Occasionally when the bag is pulsed, a small amount of dust can come through the hole and sets of the alarm. Once the pulse is over, seals the hole closes and the alarm shuts off.

(6) Dates, times, and duration of any instances where pressure drop or scrubber liquid flow rates were outside the established ranges for those parameters, the date and time that ASARCO initiated investigation, the readings at the time of the issue, a description of the underlying cause for those readings, and a description and explanation of any corrective actions, including the date and time that such actions were commenced and completed;

Hourly (block) average pressure drop(s) and liquid flow rate(s) outside range established in most recent Method 5 test:

The hourly block averages outside the established range(s) are detailed in the enclosed compact disk.

Investigation(s), cause(s) and corrective action(s) taken:

The investigation(s), cause(s) and corrective action(s) taken for each event are detailed in the enclosed compact disk.

Times scrubber(s) not in service or believed to be malfunctioning:

The times that the scrubber(s) were not in service or believed to be malfunctioning are detailed in the enclosed compact disk.

(7) Dates, times, and descriptions of deviations from the gas capture parametric monitoring requirements and/or limits of Paragraph 9;

PRIMARY HOODING PARAMETER:

Failure(s) to achieve minimum air infiltration ratio of 1:1 during blowing when improved hood is operational averaged over 24 blowing hours rolled hourly:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

SECONDARY HOODING PARAMETER DURING BLOWING:

Failure(s) to achieve minimum exhaust rate of 35,000 SCFM at a converter averaged over 24 blowing hours rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

SECONDARY HOODING PARAMETER DURING NON-BLOWING:

Failure(s) to achieve minimum exhaust rate of 133,000 SCFM at a converter averaged over 24 non-blowing hours rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

SECONDARY HOODING PARAMETER WHEN HOOD DOORS ARE CLOSED:

Failure(s) to achieve minimum negative pressure drop across a hood of 0.03 mm of Hg (0.007 inches of water), unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

TERTIARY HOODING PARAMETER AT ALL TIMES MATERIAL IS PROCESSED IN COPPER CONVERTER DEPARTMENT:

<u>Failure(s)</u> to achieve minimum exhaust rate of 400,000 ACFM averaged over 24 hours of copper converter department material processing rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

(8) Dates, times, and descriptions of deviations when ASARCO operated the furnaces, capture systems, baghouses, R&R Cottrell, or any other equipment in a manner inconsistent with the approved Operations and Maintenance Plan;

N/A. The Hayden Operations Operation and Maintenance Plan was submitted to EPA on December 21, 2016. On February 22, 2017 Asarco received a letter from EPA disapproving the submitted Operation and Maintenance Plan. Asarco is in the process of addressing EPA's comments outlined in the disapproval letter and revising the Operation and Maintenance Plan.

(9) Dates, times, and descriptions of deviations when ASARCO's material handling was carried out in a manner inconsistent with the approved Operations and Maintenance Plan and/or Fugitive Dust Plan;

OPERATION AND MAINTENANCE PLAN

The Hayden Operations Operation and Maintenance Plan was submitted to EPA on December 21, 2016. On February 22, 2017 Asarco received a letter from EPA disapproving the submitted Operation and Maintenance Plan. Asarco is in the process of addressing EPA's comments outlined in the disapproval letter and revising the Operation and Maintenance Plan.

FUGITIVE DUST CONTROL PLAN

The Fugitive Dust Plan, including the remaining engineering designs, was submitted to EPA on June 24, 2016 for EPA approval. On December 7, 2016 Asarco received comments from EPA regarding the submitted Fugitive Dust Plan and on February 6, 2017 Asarco submitted a revised Fugitive Dust Plan addressing those comments. The revised submitted Fugitive Dust Plan is still pending EPA approval.

<u>Deviation(s)</u> from material handling requirements of approved fugitive dust control plan and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Exceedance(s) of 15% Method 9 opacity limit on visible emissions from any source listed in the approved fugitive dust control plan (i.e., sources other than the furnaces and converter building) and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Opacity readings outside major openings of secondary and tertiary crushers Total Enclosure or fine ore storage building in excess of minimum measurable opacity level over 6-minute period using long-path optical density monitors and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Event(s) when DCS system recorded data outside of established operational parameters, investigation(s), cause(s), corrective action(s), and degree of success:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Dates and times when DCS system was not recording data:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

AMBIENT MONITORING NETWORK

Ambient monitoring network raw data and calculated ambient levels for the first quarter of 2017 are enclosed with this report on a compact disc. Note the Fugitive Dust Plan has been submitted and is awaiting EPA approval.

HIGH WIND EVENTS

High Wind Event data for the first quarter of 2017 is enclosed with this report on a compact disc. Note the Fugitive Dust Plan has been submitted and is awaiting EPA approval.

(10) Dates, times, and descriptions (including emissions data) of any periods where ASARCO failed to meet an emission limit or an emissions control efficiency established under this Consent Decree;

ACID PLANT PM EMISSION LIMIT

Exceedance(s) of 6.2 mg/dscm limit as demonstrated through performance testing:

SECONDARY HOOD BAGHOUSE EMISSION LIMIT

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None

ANODE FURNACE BAGHOUSE PM EMISSIONS LIMIT

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None R&R COTTRELL ESP PM EMISSIONS LIMIT

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None COPPER CONCENTRATE DRYER PM EMISSIONS LIMIT

The copper concentrate dryer emissions are routed to the existing R&R Cottrell ESP. See above section regarding the R&R Cottrell ESP PM Limit compliance.

FLASH FURNACE TAPPING/SKIMMING EMISSIONS CAPTURE SYSTEM PM EMISSIONS LIMIT

The flash furnace tapping/skimming emissions capture system is routed to the existing R&R Cottrell ESP. See above section regarding the R&R Cottrell ESP PM Limit compliance.

PROCESS-WIDE TOTAL PM EMISSIONS LIMIT

The due date for beginning the use of a measuring system described in paragraph 24.a of the decree is June 1, 2019.

Exceedances of 0.6 lb PM per ton of concentrate smelted total PM limit(s):

N/A. Dependent upon CRP completion.

Investigation(s), causes(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

DUCON-TYPE WET SCRUBBER OPERATIONAL REQUIREMENTS

Exceedance(s) of 0.05 g/dscm limit: None

DRY LIME SCRUBBING OF SO_2 ROUTED TO SECONDARY HOOD AND R&R COTTRELL REPLACEMENT BAGHOUSES

Failure(s) to meet applicable control efficiency:

N/A. Dependent upon CRP completion.

<u>Investigation(s)</u>, <u>cause(s)</u> and <u>corrective action(s)</u> taken or status of demonstration of technical infeasibility of control efficiency:

N/A. Dependent upon CRP completion.

CORRECTIVE ACTION TRIGGERS FOR ACID PLANT

Date	Time of Trigger Level Alarm	Cause and Corrective Actions Taken if Necessary
	Level / tialiti	No trigger levels were reached during the first quarter of 2017.

SO₂ EMISSIONS LIMIT FOR GASES COLLECTED FROM THE CONVERTERS

Exceedance(s) of applicable 650 ppmv limit for gases routed to acid plant or secondary hood baghouse or gases in the tertiary hood exhaust:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

(11) Dates, times and descriptions where ASARCO exceeded the Blowing rate limit set forth in Paragraph 8 and/or, for such time as the Blowing hour limit in Paragraph 8.b remains applicable, the Blowing hour limit;

Exceedance(s) of converter blowing limit of 32,000 SCFM averaged over 5 minutes of blowing and rolled each minute:

N/A. Dependent upon CRP completion.

TOTAL COMBINED BLOWING TIME OR SO₂ LIMIT ON ACID PLANT TAIL GAS

Exceedance(s) of total combined blowing time limit at all converters of 21 hours per 24-hour period rolled hourly, unless Asarco accepts 100 ppmv SO₂ limit on acid plant tail gas:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

ii. Status and/or completion of construction or compliance milestones;

CONVERTER RETROFIT PROJECT

Key equipment for the Converter Retrofit Project is in the process of being procured and/or delivered to the facility. The foundation for the primary ventilation system cooling tower was completed in March 2017 and the erection of the cooling tower structure is scheduled to be completed by June 2017. The primary ventilation ID fan's foundation began in the first quarter and is scheduled to be completed in April 2017. The converter process gas electrostatic precipitator assembly began. The foundations and retainer walls for the converter flux feed system commenced and is scheduled to be completed in April 2017. Additionally, the three tertiary hoods were installed and currently Recon is working towards sealing the converter aisle siding to the tertiary hoods. See also the PowerPoint presentation titled "Hayden CRP 1Q2017 Status" for additional information.

R&R COTTRELL ESP REPLACEMENT BAGHOUSE

The replacement baghouse and ID fan have both been ordered. The foundation installation for the baghouse and ID fan is scheduled to commence in April 2017.

DRY LIME SCRUBBING OF SO₂ ROUTED TO BAGHOUSES

The engineering design was completed in the first quarter of 2017 and equipment has been ordered.

PREPARATION OF FUGITIVE EMISSIONS STUDY PROTOCOL

Asarco selected SLR International Corp. to assist in preparing the fugitive emission study protocol. The protocol for the fugitive emission study was submitted to EPA for approval on June 15, 2016. Asarco received comments on the submitted protocol on December 5, 2016 and on January 20, 2017 Asarco submitted a revised fugitive emission study protocol addressing those comments. Finalization of the protocol is still pending EPA's approval.

IMPLEMENTATION OF APPROVED FUGITIVE EMISSIONS STUDY PROTOCOL

The due date for the commencement of the fugitive emissions study protocol for the initial study is 6 months after the completion of the converter retrofit project.

LONG-PATH OPTICAL DENSITY MONITORS SPECIFIED IN PROTOCOL

The due date for the installation of the three long-path optical density monitors at the building emission points specified in the fugitive emissions study protocol is 6 months after the completion of the initial fugitive emissions study.

iii. Status of PM CEMS installation and PS-11 testing pursuant to Paragraph 14;

N/A. The Installation, Certification and QA/QC Protocol for the PM CEMS was submitted to EPA for approval on May 3, 2016. On October 7, 2016 Asarco responded to EPA's initial questions regarding the submitted Installation, Certification and QA/QC Protocol for the PM CEMS. On December 5, 2016 Asarco received additional comments from EPA regarding the revised protocol and Asarco submitted a revised protocol addressing those comments on January 17, 2017. EPA then requested that Asarco resubmit the revised protocol to remedy a pagination which was resubmitted on March 3, 2017. On March 8, 2017 EPA approved of the March 3, 2017 revised Installation, Certification and QA/QC Protocol for the PM CEMS.

iv. Problems encountered or anticipated with Consent Decree compliance, together with implemented or proposed solutions;

None

v. Status of any permit applications pertaining to any of the requirements of this Consent Decree;

The air quality permit for the converter retrofit project required under the decree was issued by ADEQ on January 19, 2016. This permit revision included the R&R Cottrell replacement baghouse (termed vent gas baghouse) and the dry lime scrubbing systems that will be installed prior to the secondary hood baghouse and new vent gas baghouse.

Preparation of the balance of the conforming permitting required under the decree is ongoing and corresponding permit revision applications will be submitted in a timely manner.

vi. The status of the SEP under Section VIII and Appendix C including, at a minimum, a narrative description of activities undertaken; and

No actions have been taken at this time to procure the new diesel-electric switch locomotive. The due date for purchasing and operating the new diesel-electric switch locomotive is December 30, 2018.

vii. The status of the Environmental Mitigation Projects under Section VII and Appendix A including, at a minimum, a narrative description of activities undertaken; status of Environmental Mitigation Project milestones set forth in Appendix A; and a summary of costs incurred since the previous report.

PINAL COUNTY ROAD PAVING ENVIRONMENTAL MITIGATION PROJECT

The project plan was submitted to EPA for approval on June 16, 2016. On August 5, 2016, Pinal County submitted to EPA its identification of the County's legal authority to accept the funding of the project and conduct the project using the funding. On February 23, 2017

Asarco submitted a revised project timeline and on March 3, 2017 EPA submitted a letter to Asarco approving the revised Pinal County Road Paving Mitigation Project. Asarco set up an account with Pinal County for the mitigation project and on April 3, 2017 \$1,000,000 was transferred to Pinal County. The project funding commenced however, the County has spent \$0.00 on the project as of March 31, 2017.

GILA COUNTY LEAD-BASED PAINT ABATEMENT ENVIRONMENTAL MITIGATION PROJECT

The project plan was submitted to EPA for approval on June 16, 2016. Coordination of the special escrow account under agreement with the County is pending. On August 1, 2016, Gila County submitted to EPA its identification of the County's legal authority to accept the escrow funding of the project and conduct the project using the funding. On February 1, 2017 Asarco set up a conference call between EPA, Gila County and Asarco to discuss the next steps towards revising the mitigation project plan. Gila County and Asarco have had discussions about hiring a consultant to assist with creating a new project plan, and on March 21, 2017 Asarco hired Western Technologies Inc. to create a plan for the lead-paint abatement project. Since the funding is not payable to the escrow account until after the plan is approved, the County has spent \$0.00 on the project as of March 31, 2017.

55.b Description of any non-compliance with the requirements of this Consent Decree, including those identified in Paragraph 55.a.i and an explanation of the violation's likely cause and the remedial steps taken, to be taken, to prevent or minimize such violation.

There were no issues of non-compliance during the first quarter of 2017.

PARAGRAPH 58. REPORT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph A. Wilhelm General Manager Hayden Operations

JAW/rcg

Enclosure